

FIG. 1

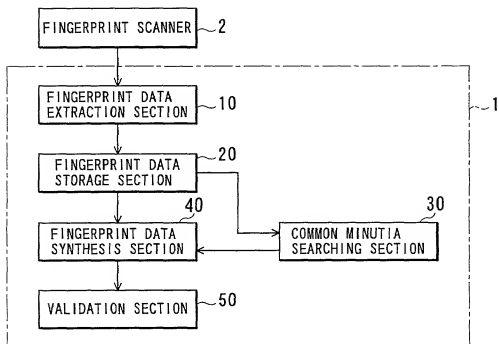


FIG. 2

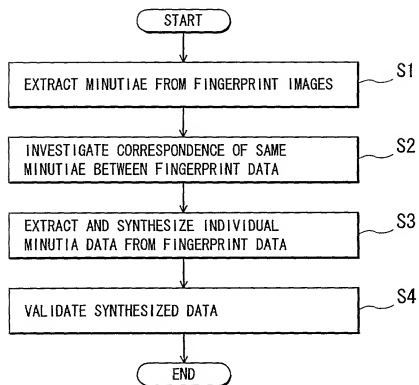




FIG. 4

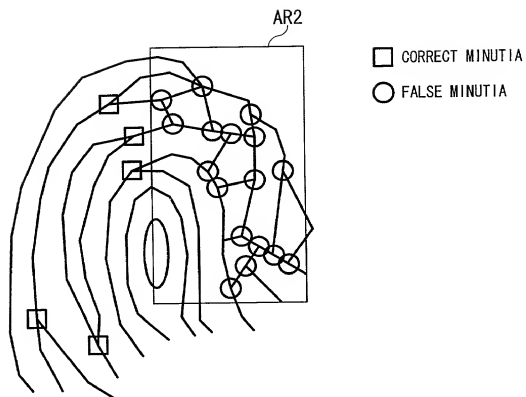


FIG. 5

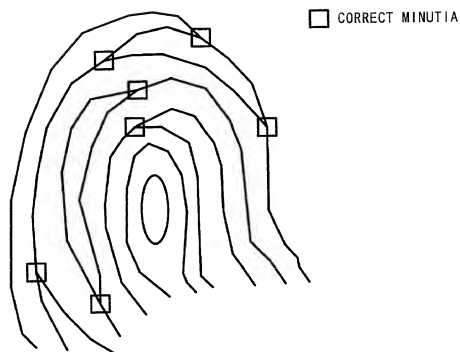


FIG. 6A

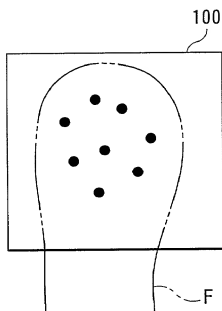
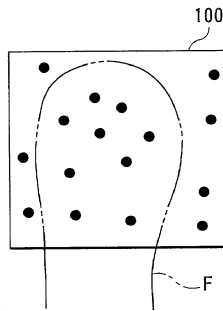


FIG. 6B



● MINUTIA

FIG. 7A

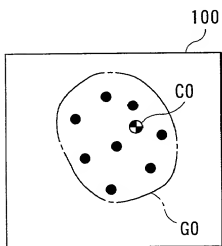
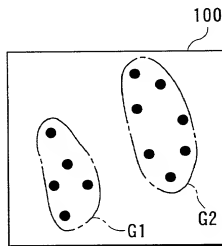


FIG. 7B



● MINUTIA

FIG. 8

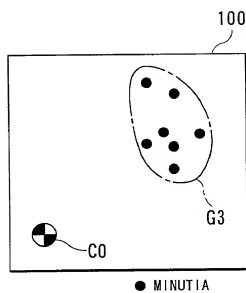


FIG. 9

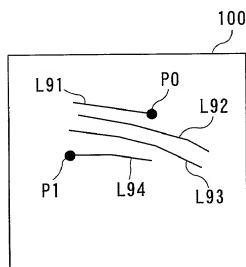


FIG. 10

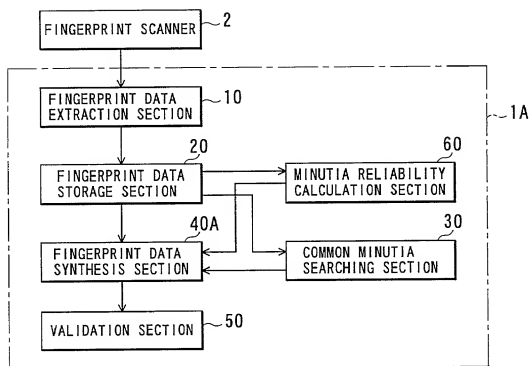




FIG. 11

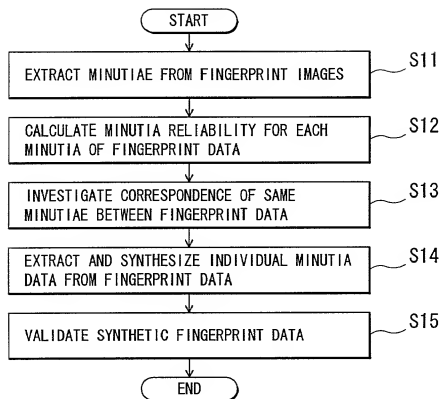


FIG. 12A

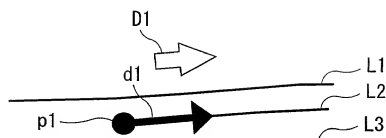


FIG. 12B

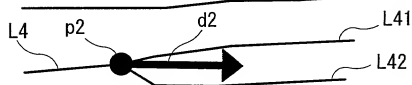


FIG. 12C

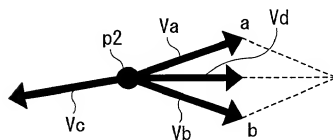


FIG. 13

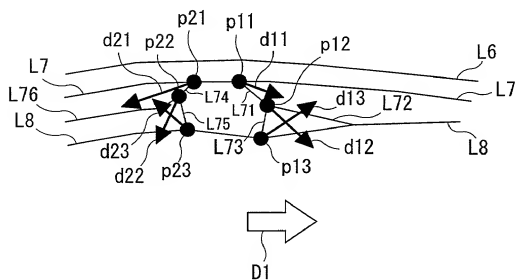


FIG. 14

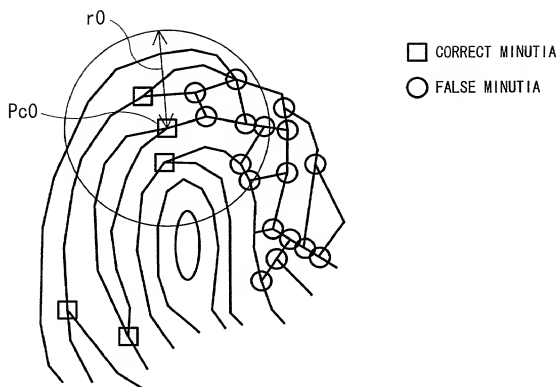


FIG. 15A

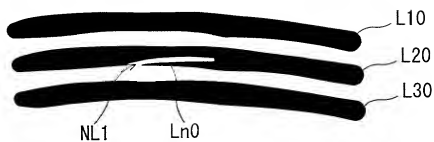


FIG. 15B

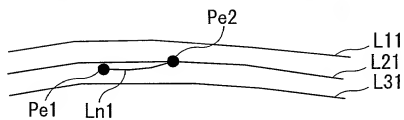


FIG. 16A

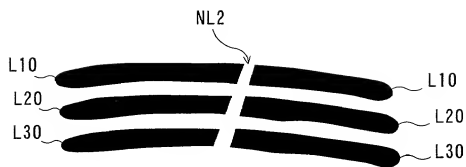


FIG. 16B

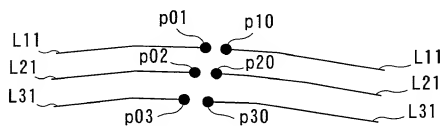


FIG. 16C

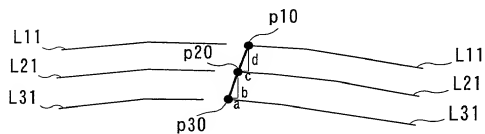
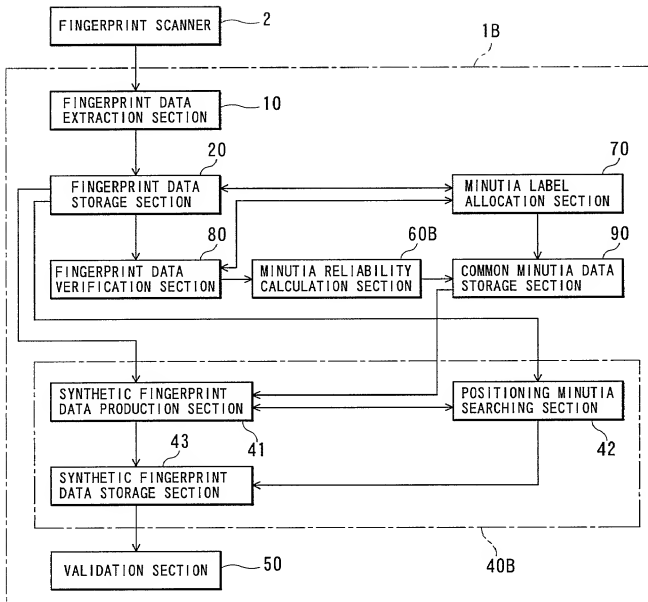
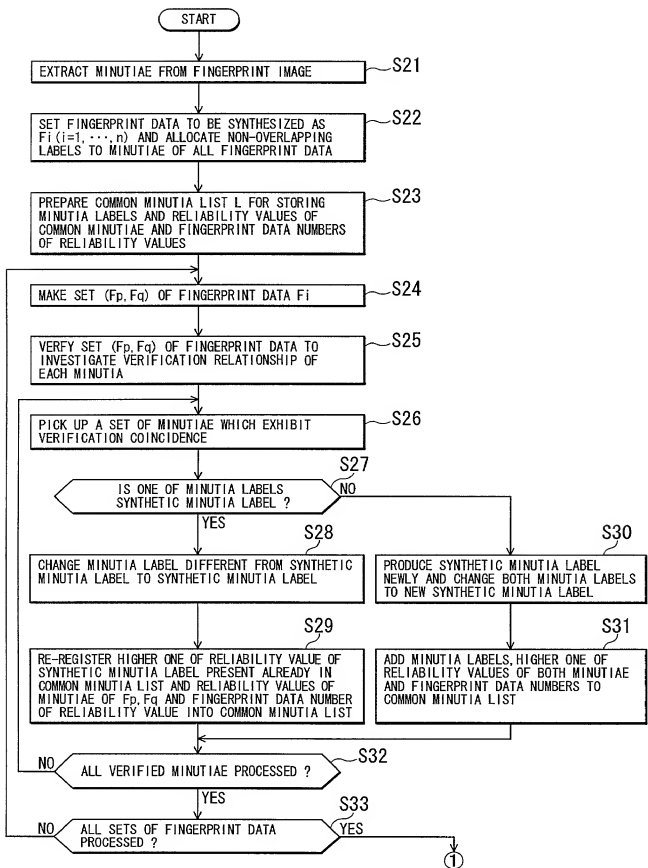


FIG. 17



# FIG. 18



# FIG. 19

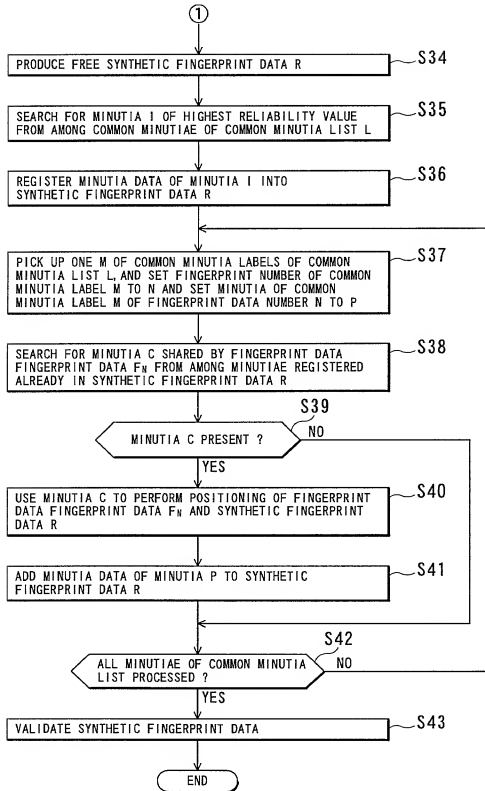


FIG. 20A

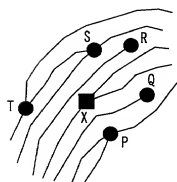


FIG. 20B

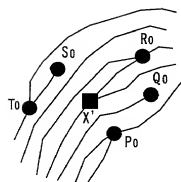


FIG. 21A

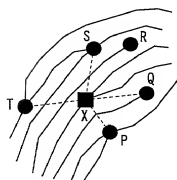


FIG. 21B

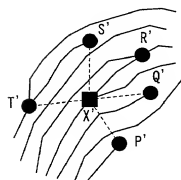


FIG. 22A

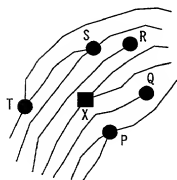


FIG. 22B

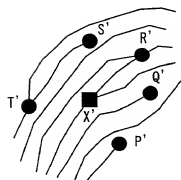
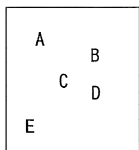


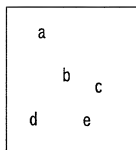


FIG. 23A



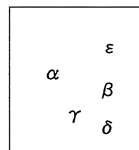
FINGERPRINT DATA F1

FIG. 23B



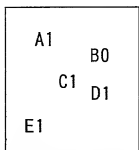
FINGERPRINT DATA F2

FIG. 23C



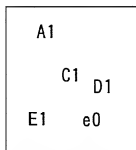
FINGERPRINT DATA F3

FIG. 24A



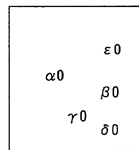
FINGERPRINT DATA F1

FIG. 24B



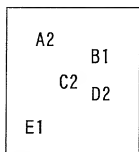
FINGERPRINT DATA F2

FIG. 24C



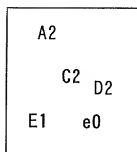
FINGERPRINT DATA F3

FIG. 25A



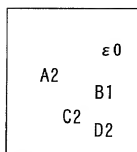
FINGERPRINT DATA F1

FIG. 25B



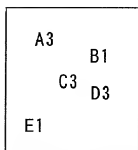
FINGERPRINT DATA F2

FIG. 25C



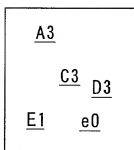
FINGERPRINT DATA F3

FIG. 26A



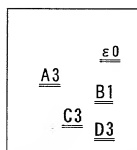
FINGERPRINT DATA F1

FIG. 26B



FINGERPRINT DATA F2

FIG. 26C



FINGERPRINT DATA F3

FIG. 27

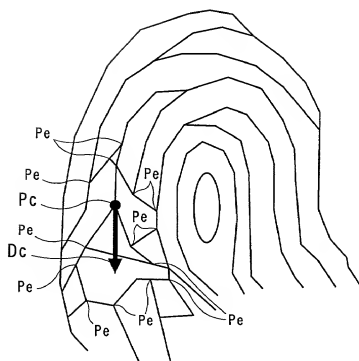
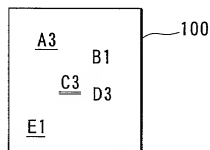


FIG. 28



SYNTHETIC FINGERPRINT DATA

FIG. 29A

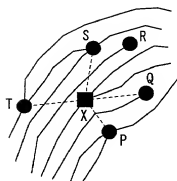


FIG. 29B

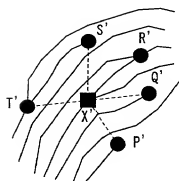


FIG. 29C

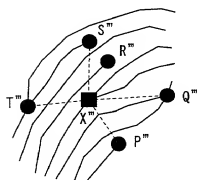
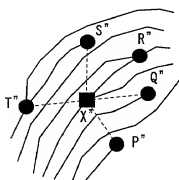
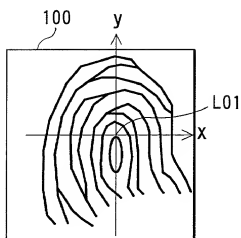


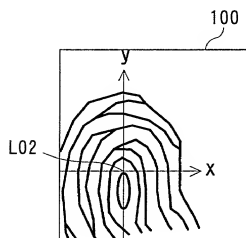
FIG. 29D



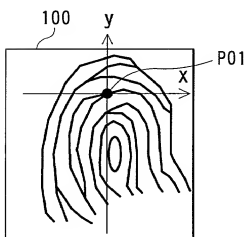
**FIG. 30A**



**FIG. 30B**



**FIG. 31A**



**FIG. 31B**

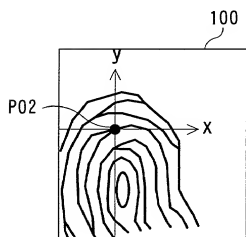
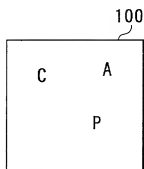
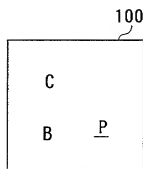


FIG. 32A



FINGERPRINT DATA  $F_N$

FIG. 32B



SYNTHETIC FINGERPRINT DATA  $R$

C : COMMON MINUTIA  
 A, B : MINUTIA NOT COMMON  
 P : MINUTIA TO BE SYNTHESIZED  
P : SYNTHESIZED MINUTIA

# FIG. 33

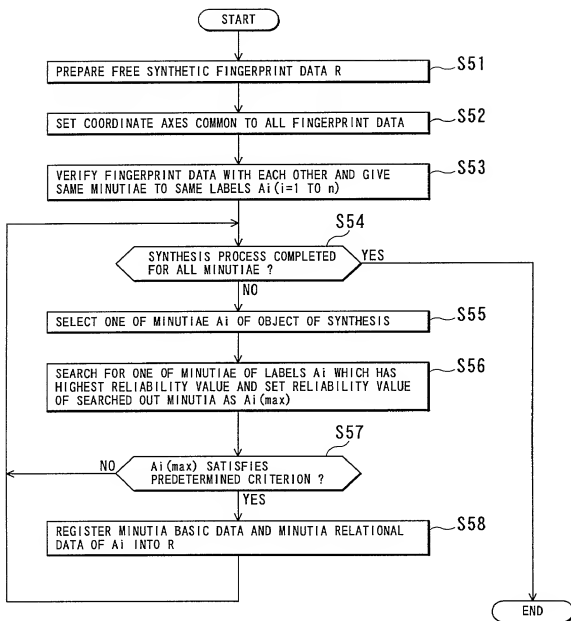
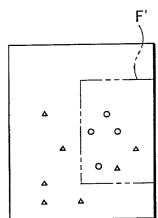
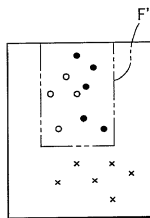


FIG. 34A



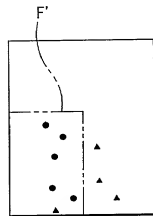
FINGERPRINT DATA FA

FIG. 34B



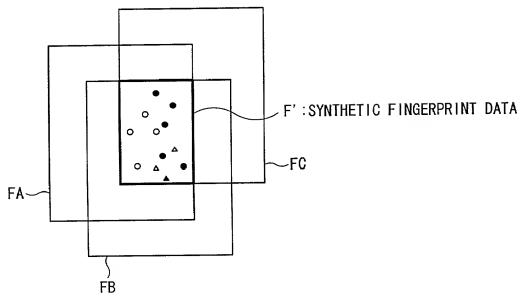
FINGERPRINT DATA FB

FIG. 34C



FINGERPRINT DATA FC

FIG. 34D



- : MINUTIA EXISTING IN BOTH OF FA & FB
- : MINUTIA EXISTING IN BOTH OF FB & FC
- △ : MINUTIA EXISTING IN FA ONLY
- × : MINUTIA EXISTING IN FB ONLY
- ▲ : MINUTIA EXISTING IN FC ONLY